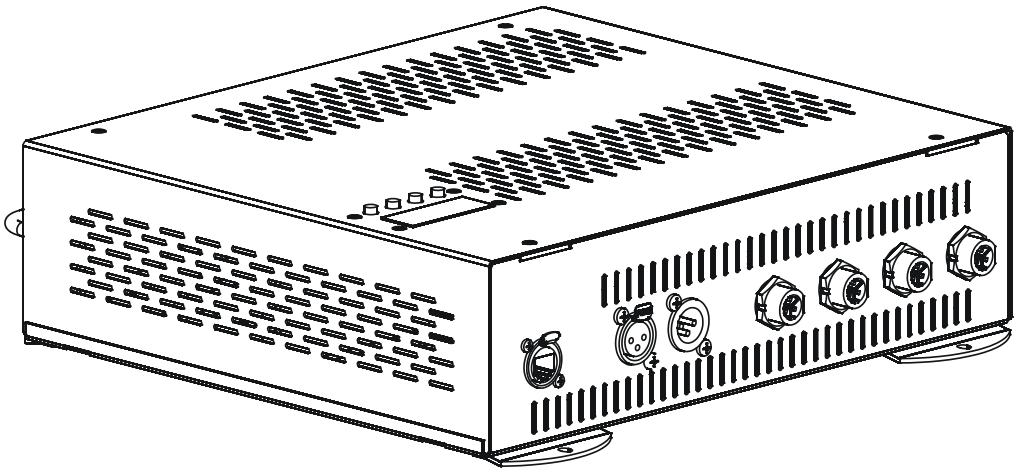
ArcDotPower



USER MANUAL

Version 1.1

ArcDot Power

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CAUTION!
Unplug mains lead before opening the housing!

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOU INITIAL START - UP!

ATTENTION!
Débrancher l'appareil avant d'ouvrir le boîtier!

POUR VOTRE SÉCURITÉ, LISEZ ATTENTIVEMENT CETTE NOTICE AVANT LA PREMIERE UTILISATION

1. Important safety instructions

Every person involved with installation and maintenance of this product has to:
- be qualilfied
- **follow the instructions and heed all warnings in this manual**

CAUTION!
Be careful with your operations. With a high voltage you can suffer a dangerous electric shock when touching the wires inside the unit!

This product has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

WARNING
To prevent injury, this apparatus must be securely installed in accordance with the installation instructions."

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not use this apparatus near water. Clean only with dry cloth.

MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

Only use attachments/accessories specified by the manufacturer.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Use a source of AC power that complies with local building and electrical rules.AC power has to have both overload and short circuit protection.

***This device falls under protection class I.Therefore the ArcDotPower has to be connected to a mains socket outlet with a protective earthing connection*!**

1. Consignes de sécurité importantes

Toute personne impliquée dans l'installation et la maintenance de ce produit doit:
- Être suffisamment qualifié
- Suivre les instructions de ce manuel

ATTENTION!
Soyez prudent avec vos manipulations. Avec une haute tension, vous risquez un choc électrique en touchant les fils à l'intérieur de l'appareil!

Ce produit a quitté nos ateliers dans un état irréprochable. Afin de maintenir cet état et pour assurer un bon fonctionnement, il est absolument nécessaire de suivre les consignes de sécurité et les notes contenues dans ce manuel.

AVERTISSEMENT
Pour éviter toute blessure, cet appareil doit être solidement fixé à en conformité avec les instructions d'installation. "

Ne pas bloquer les ouvertures de ventilation. Installer conformément aux instructions du fabricant.

Ne pas installer près de sources de chaleur telles que radiateurs, ou autres appareils (y compris les amplificateurs) produisant de la chaleur.

Ne pas utiliser cet appareil près de l'eau. Nettoyer avec un chiffon sec.

Une prise de branchement ou un coupleur est utilisé comme dispositif de déconnexion, ce dispositif doit rester facilement accessible.

N'utilisez que des accessoires spécifiés par le fabricant.

Protégez le cordon d'alimentation du piétinement ou pincement, particulièrement au niveau des fiches, des prises, et le point où ils sortent de l'appareil

Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce soit. cordon d'alimentation, fiche est endommagé, liquide renversé a l interieur, ou des objets sont tombés dans l'appareil, l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement , ou s'il est tombé.

Utilisez une source de courant alternatif qui est conforme a l'endroit ou vous vous trouvez. La source alternative doit avoir à la fois une protection de surcharge et de court-circuit.

Ce dispositif relève de la classe de protection I. Par conséquent, la ArcDotPower doit être connecté à une prise électrique reliée à la terre!

2. Operating determinations

This product was designed for indoor use only.

If the unit has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your unit. Leave the unit switched off until it has reached room temperature.

Avoid brute force when installing or operating the unit.

When choosing the installation-spot, please make sure that the unit is not exposed to extreme heat, moisture or dust.

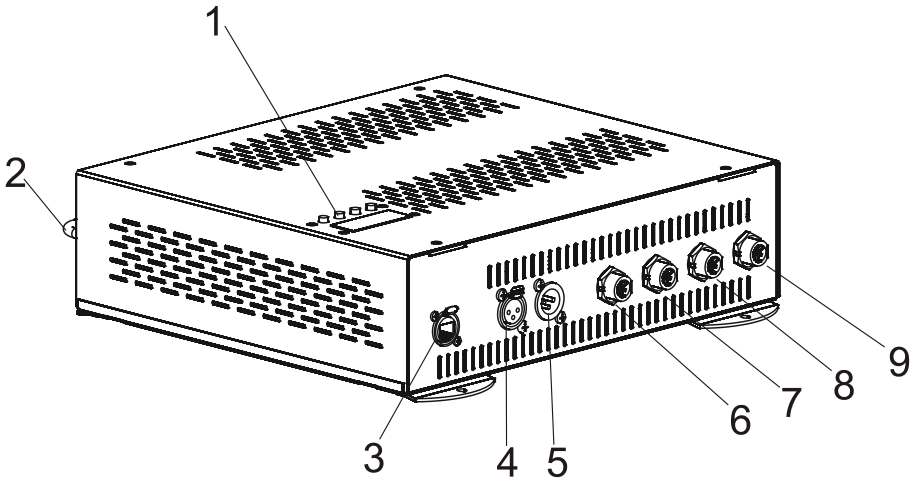
Only operate the unit after having checked that the housing is firmly closed and all screws are tightly fastened.

The maximum ambient temperature 40° C must never be exceeded.

Operate the unit only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the unit. Most damages are the result of unprofessional operation!

Please use the original packaging if the product is to be transported.
Please consider that unauthorized modifications on the unit are forbidden due to safety reasons!

3.Description of the ArcDot Power



1 - Control board
2 - Power cord
3 - Ethernet
4 - DMX Output
5 - DMX Input
6 - ArcDot output 4
7 - ArcDot output 3
8 - ArcDot output 2
9 - ArcDot output 1

4.Installation

CAUTION!
These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

4.1.Connection to the mains:

The ArcDot Power is equipped with auto-switching power supply that automatically adjusts to any 50/60Hz AC power source from 100-240 Volts.
The fixture is equipped the cord & plug QP 02 but you can use the following plugs: P620,24W47,14W49,24W 49,26W81,HBL4720C,HBL2311, HBL2321,HBL2811 and the cords SJT or 22326.

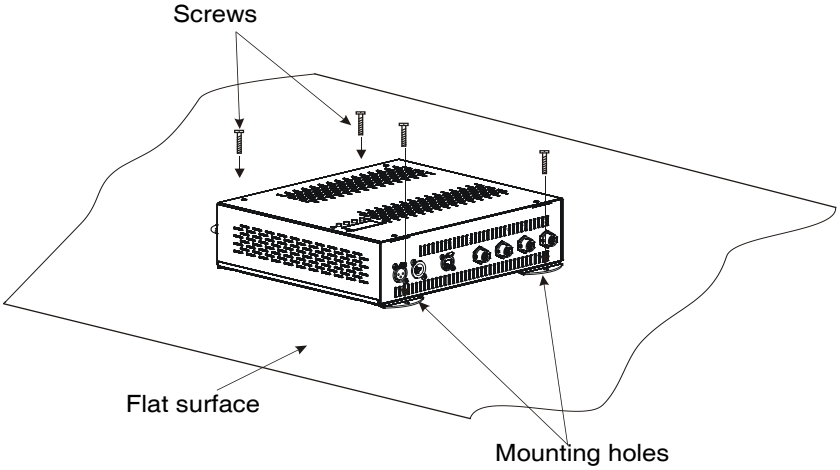
Cord plug connection:

Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Liht blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

This device falls under protection class I.Therefore the ArcDot Power has to be connected to a mains socket outlet with a protective earthing connection.

4.2.Mounting the ArcDot Power

The ArcDot Power should be be placed on a non-flammable flat surface in any orientation and fixed by the four screws.There are four mounting holes of a diameter of 5 mm in housing of the driver. Ensure that instalation place is enough ventilated.



4.3. Connecting ArcDotPower and ArcDots

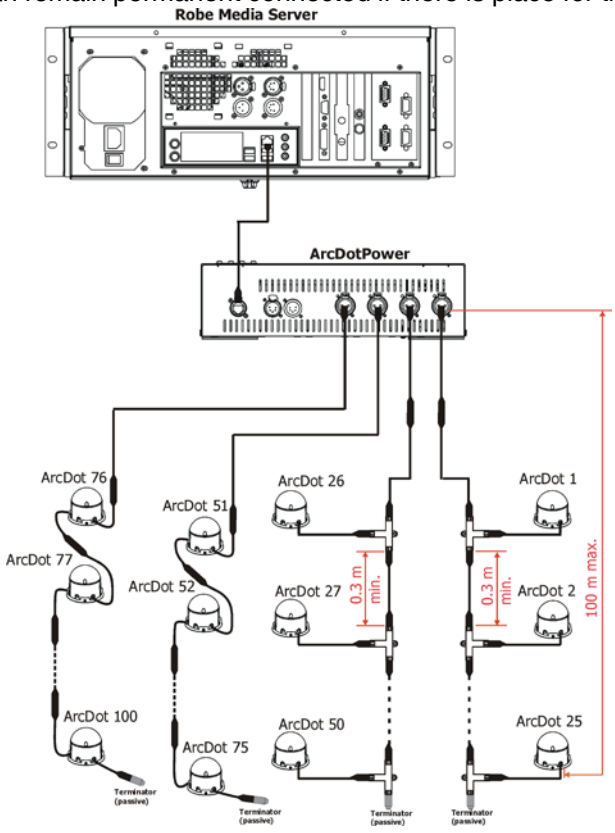
Connect ArcDots to the LED outputs of the ArcDotPower, typically 25 ArcDots per output (max. 35 ArcDots). Max. number of all LED modules connected to the ArcDotPower is 100. The ArcDots can be interconnected directly or by using T- connectors - see the picture below. If you use Artnet for control of the ArcDot Power, you can connect ArcDots to all LED outputs 1-4.

For larger installation (more than 25 ArcDots), the ArcDotPower should be connected to the Robe Media Server which allows automatic pixel mapping and full control of the ArcDots modules. Without Robe Media Server, you have to perform pixel mapping manually using the menu "dotS".

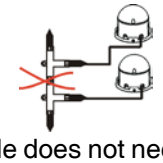
To connect ArcDots

1. Disconnect ArcDotPower from mains.
2. Connect ArcDots to the ArcDotPower. Connect active terminators to each ArcDots line.
3. Connect ArcDotPower to mains
4. Run procedures Pixels checking (Find) and Pixel sorting (Sort) from menu ArcDot (dotS)
5. Save found values with option Store (Stor)
6. Disconnect the ArcDotPower from mains and replace active terminators by passive terminators*.
7. Connect the ArcDotPower to mains and to the Robe Media Server.

* Active terminators can remain permanent connected if there is place for them (they are biggers than passive ones).



<u>The minimum cable length of 0.3m</u> between two T-connectors has to be kept in case that the pixel sorting is executed manually from the ArcDotPower menu.



This rule does not need to be kept if the Robe Media Server is used for pixel sorting

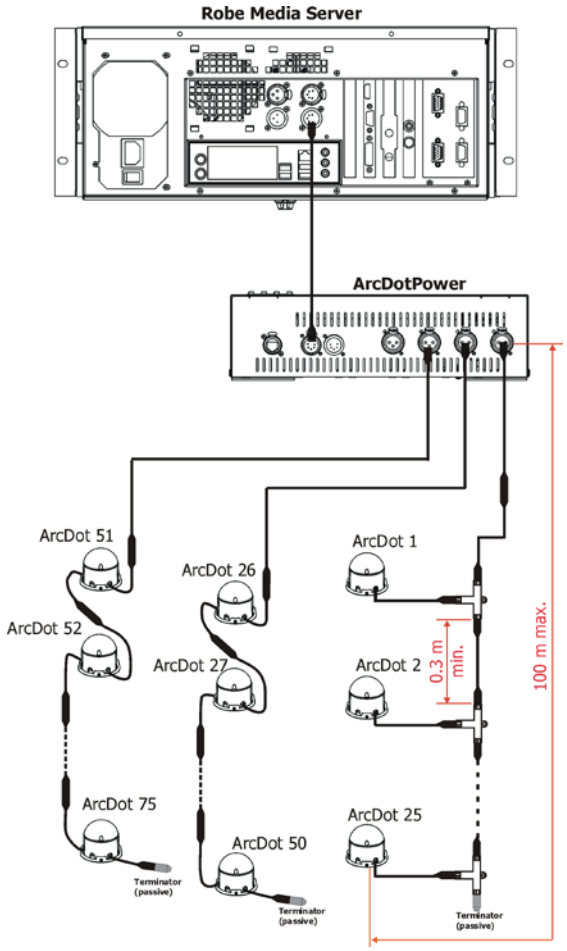
Max. total length of cable depends on the number of ArcDots connected to the ArcDotPower (100 m @ 25 ArcDots, 65 m @ 35 ArcDots per output.

Every ArcDot line has to be terminated with the passive terminator!

If the line between ArcDots is disconected, the ArcDots behind point of interrupt will not work. Before restoring connection betwen ArcDots, switch off the ArcDotPower.
In case that some ArcDot is changed, the same address as had original ArcDot is assigned to it by ArcDot-Power. **It is very important to save ArcDots configuration at every change of the ArcDot**.(Menu "Dots" -> "Store"),

Max. cable length between ArcDotPower and the last connected ArcDot module should not be exceeded: **100m @ 25 ArcDots per LED output** or **65 m @ 35 ArcDots per LED output**. Only one ArcDot module can be connected to the T-connector.

Note: If DMX is used for control of the ArcDot Power, the LED outputs 1-3 may be used only (LED output load is the same as in case of control by Artnet - typically 25 LED modules, max 35 LED modules and 100 modules max. load of ArcDotPower).



Every ArcDot line has to be terminated with the passive terminator!

The Robe Media Server allows to choose two modes of ArcDots connection: Fixed-wiring mode and Picture mode. For detailed description see the user manual of the Robin Media Server.

5.ArcDot Power - Control menu map

Default settings=Bold print

A001
- dM. Ad.
- IP.Ad
  - dEF.A
    - SEt
  - CUS.A.
    - IP.A1 *(0-255)*
    - :
    - IP.A4 *(0-255)*
    - SEt
- nEt M.
  - nE.M.1 *(0-255)*
  - :
  - nE.M.4 *(0-255)*

dotS
- FInd
- Sort
- F.tin *(0-255)*
- CurV *(0-255)*
- Stor.

PErS
- Art.U. (0-255)
- dISP.
  - turn
  - d.On
  - d.Int *(30, 50, 80,100)*
- dM.In.
  - DMH
  - Eth
- dEF.S.

InFo
- S.VEr.
  - d.1
  - :
  - MA.In
- IP.Ad.
  - IP.A1
  - :
  - IP.A4
- rdM.U.
  - rdM.1
  - :
  - rdM.3
- MAC.A
  - MAC.1
  - :
  - MAC.3
- dotS
  - d.MiS
  - nEU.d.

SPEC
- UPd *(no, YES)*

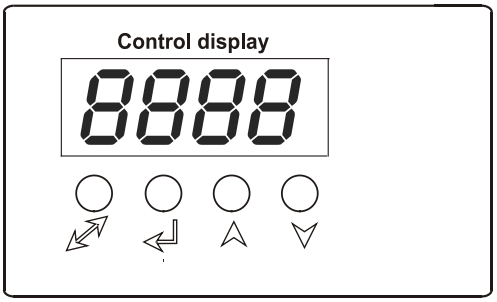
6.ArcDot Power - DMX protocol,

version 1.0

Channel	Value	Function	Type of control
ArcDot 1			
1	0-255	**Red** Red LED saturation control (0-100%)	proportional
2	0-255	**Green** Green LED saturation control (0-100%)	proportional
3	0-255	**Blue** Blue LED saturation control (0-100%)	proportional
ArcDot 2			
4	0-255	**Red** Red LED saturation control (0-100%)	proportional
5	0-255	**Green** Green LED saturation control (0-100%)	proportional
6	0-255	**Blue** Blue LED saturation control (0-100%)	proportional
ArcDot 3			
7	0-255	**Red** Red LED saturation control (0-100%)	proportional
8	0-255	**Green** Green LED saturation control (0-100%)	proportional
9	0-255	**Blue** Blue LED saturation control (0-100%)	proportional
: **:** **:** **:** **:** **:** **:** **ArcDot 100**			
298	0-255	**Red** Red LED saturation control (0-100%)	proportional
299	0-255	**Green** Green LED saturation control (0-100%)	proportional
300	0-255	**Blue** Blue LED saturation control (0-100%)	proportional

7.Control board

The control panel situated on the top cover of the ArcDot Power allows fixture addressing and set the driver´s behaviour.



Control elements:

[ENTER] button- enters menu,confirms adjusted values and leaves menu.

[UP] button and[DOWN] button- moves between menu items on the the same level, sets values.

[ESCAPE] button- leaves the menu without saving value.

7.1 Addressing the ArcDot Power

M.Ad. - DMX address. Select this menu item to set desired DMX address.l

IP.Ad. - IP address. Select this menu item to set desired IP address. IP address is the Internet protocol address.The IP uniquely identifies any node (fixture) on a network. There cannot be 2 fixtures with the same IP address on the network!

dEF.A. - Default IP address. This address is derived from fixture´s MAC address and cannot be changed. Confirm item **"SEt"** if you want to set default IP address.

CUS.A. - Custom IP address. IP address consists of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g., 172.16.254.1. Each part represents a group of 8 bits (octet) of the address.

The following items **"IP.A1"**, **"IP.A2", "IP.A3", "IP.A4"** allow to set each part (number) of the address. After setting desired IP address, confirm item **"SEt"** to save set address.

nEt.M. - Net mask. Select this menu item to set desired Net mask. A Net mask is a 32-bit mask used to divide an IP address into subnets and specify the networks available hosts.
The following items **"nE.M.1"**, **"nE.M.2", " nE.M.3", " nE.M.4"** serve for seting of each part (number) of the net mask.

7.2 ArcDots

Use this menu to prepare ArcDots for operation in desired matrix.

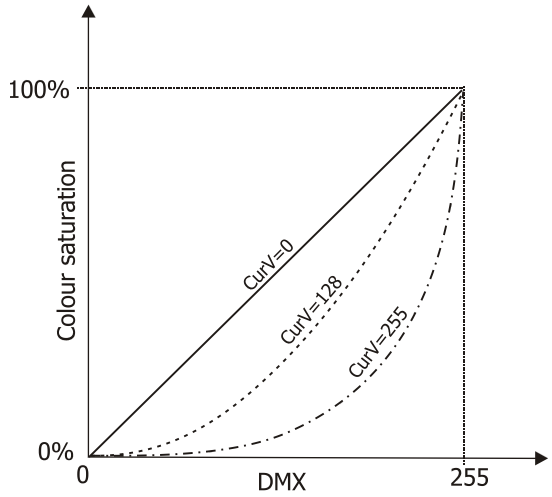
FInd - **Pixels checking.** This function checks all pixels connected to the fixture and the message “donE” is displayed after finishing the procedure.
NOTE: Active terminator has to be connected to the last ArcDot of each ArcDots line.

Sort - **Pixels sorting.** This function starts auto-sorting of each conncted ArcDot modules. After sorting, dots will have order Red, Green, Blue.
NOTE: Active terminator has to be connected to the last ArcDot of each ArcDots line.

M.F.ti. --- Max. fade time. Select this menu item to set a desired max. fade time (0-25.5 sec.). This adjusted fade time influences fade of RGB and dimmer during DMX operation:

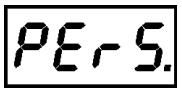
If time between two receiving DMX values is > than fade time set in the item M.F.ti., the entire adjusted fade time will be used.
If time between two receiving DMX values is < than fade time set in the item M.F.ti., the adjusted fade time will be reduced to fill entire time between the two receiving DMX values.
e.g. M.F.ti.=2sec. and fixture has received Red=0 DMX, after 5 seconds will receive Red=255 DMX. It means, that red will go to full intensity during 2 seconds.
M.F.ti.=8 sec. and fixture has received Red=0 DMX, after 5 seconds will receive Red=255 DMX. It means, that red will go to full intensity during 5 seconds. (Max, fade time is reduced from 8 sec. to 5 sec.).

CurV. --- Saturation curve. This menu item allows you to select desired running of colour saturation. You can select 255 colour saturation runnings in all. The value 0 corresponds linear curve, the value 128 corresponds exponential curve with index 1.9 and last value 255 corresponds exponential curve with index 2.6.



Stor. --- Store. Select this function to save all adjustem items in the menu "dotS"

7.3 Personality



Use this menu to modify the ArcDotPower operating behavior.

Art.U. - ArtNet Universe. Select the menu item to set ArtNet universe. Art-Net is a proprietary protocol for transmitting DMX512 (with RDM) over UDP/IP. Up to sixteen DMX512 universes can be accessed through one IP subnet. The Universe is a single DMX 512 frame of 512 channels.

dISP. - **Display adjusting**. This menu allows you to change the display settings.
turn - Select this item to turn the display by 180°.
d.On - This menu item allows you to keep the display on or to turn it off automatically 2 minutes after last pressing any button on the control panel.
d.Int. - Select this menu item to adjust the display intensity (30, 50, 80, 100-max.).

dM.In. - DMX input selection. This menu allows to choose desired DMX data input:
dMH - **DMX**. If this input is selected, only LED outputs 1-3 are active.
Eth - **Ethernet**. If this input is selected, all LED outputs (1-4) are active.

dEF.S. - Default setting. Select this option to reset fixture personalities and setting to the default (factory). values.

7.4 Fixture information

Use this menu to read useful information about the fixture.

S.VEr. - Software version. Select this menu item to read software versions.

d.1-d.100 - Dot version. The items show software version of each ArcDot.
MA. In - Driver version. The item shows software version of the ArcDotPover.

IP.Ad. - IP address . Select this menu item to read individul parts (**"IP.A1"**, **"IP.A2", "IP.A3", "IP.A4")** of the current IP address.

rdM.U. - RDM Universe ID . Select this menu item to read individul parts (**"rdM.1"**, **"rdM.2", "rdM.3")** of the RDM Universe ID.

MAC.A. - MAC Address. Select this menu item to read individul parts (**"MAC.1"**, **"MAC.2", "MAC.3")** of the MAC address.

dotS. - ArcDots information. Select this menu item to read information about ArcDots
d.MiS - Missing ArcDot. The item shows the number of ArcDots which were not detected by the Pixel checking procedure ("Find") .
nEU.d - New ArcDot. The item shows the number of recently connected ArcDots.

7.5 Test

The menu starts program sequense over all connected ArcDots in order red, green, blue. Before running this Test program, the "Pixel checking" and Pixel sorting" procedures from menu PErS have tu be performed.

7.6 Special functions

Use this menu for special services.

uPd. --- **Software update** - Using this function you can update software in the fixture via PC and USB (serial link).
The following are required in order to update software:
- PC running Windows 95/98/2000/XP/7 or Linux
- DMX Software Uploader
- Flash cable RS232/DMX (No.13050624) or Robe Universal Interface
-

Note1. Software update should execute a qualified person.If you lack qualification, do not try the update yourself and ask for help your ANOLIS distributor.
Note 2. IP address, and settings in menu " PErS" will be set to their default values.

To update software in the fixture:
1.Installation of DMX Software Uploader:
1.DMX Software Uploader program is available from the ANOLIS web site at WWW.anolis.cz.
2.Make a new directory (e.g. ANOLIS_Uploader) on your hard disk and download the software to it.
3.Unpack the program from the archives. Program file has name:DSU_name of corresponding fixture_SoftwareID.SoftwareID describes the versions of fixture software included in DMX Software Uploader. Higher number means later software versions.
2.Fixture software updating:
1.Determine which of your COM port is available on your PC and connect it with to the DMX input of the fixture using the Flash cable. Do not extend this cable! Disconnect the fixture from the other fixtures in DMX chain! Turn on the computer and the fixture.
2.Switch the fixture to the update mode by selecting the option Software update in menu Special Functions on the fixture control panel:SPEC-->UPd-->yES.(From this option you cannot return back to the main menu. If you do not want to continue in software update, you have to switch off and on the fixture to leave this option!)
3.It is recommended that you exit all programs before running the Software Uploader.
4.Start the Software Uploader program. Select desired COM and then click Connect button.
If the conection is OK, click Start Uploading button to start uploading. It will take several minutes to perform software update.All processors will be updated (including processors with the same software version).
If you wish to update only later versions of processors, enable the Incremental Update check box.

Avoid interrupting the process. Update status is being displayed in the list window.
When the update is finished, the line with the text “The fixture is successfuly updated‘ will appear in this window and the fixture will reset with the new software.

Note: In the case of interruption of the upload process (e.g. power cut), the fixture remains in the update mode and you have to repeat the software update again.

8.Technical Specifications:

Power supply
Input Voltage: 100-240 V AC, 50-60 Hz
Fuse:T 8 A
Max.Pover Consumption: 640W

Control and programming
Protocols: USITT DMX-512, Artnet
Display: 4 digit LED
4 control buttons

DMX channels
Dot 1:	1=R1	Dot 2:	4=R2	.....Dot 100:	298=R100
	2=G1		5=G2	.....	299=G100
	3=B1		6=B2	.....	300=B100

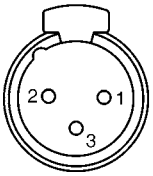
Output
Max.Output Voltage:48V DC
Max.Output power: 583 W
ArcDot outputs: 4
Max.load per ArcDot output: 35 ArcDots (typically 25 ArcDots)
Total max.load per ArcDot Power: 100 ArcDots

Maximum cable length between ArcDot output and the last connected ArcDot module
100 m (25 ArcDots per output)
65 m (35 ArcDots per output)

Total heat dissipation
max. 1980 BTU/hr

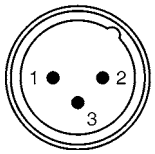
Connections
DMX 512: 3-pin male/female XLR

Output

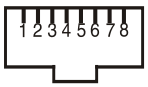


1 Shield
2 Signal (-)
3 Signal (+)

Input

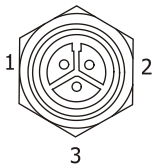


ArtNet: RJ45



1 TD+
2 TD-
3 RX+
4 Not connected
5 Not connected
6 RX-
7 Not connected
8 Not connected

LED output: Chogori CGRBB-03RFFS-SC8001 (female)

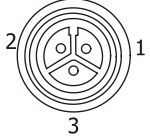


1 GND
2 +48V
3 Data

Connection ArcDot-ArcDotPower

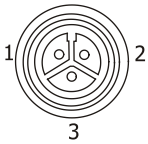
Cable : Li9Y11Y, 2xAWG16+1xAWG 20

Connectors: Chogori CGRBB-03BMMA-SL8001 (male)



1 GND (blue wire)
2 +48V (red wire)
3 Data (orange wire)

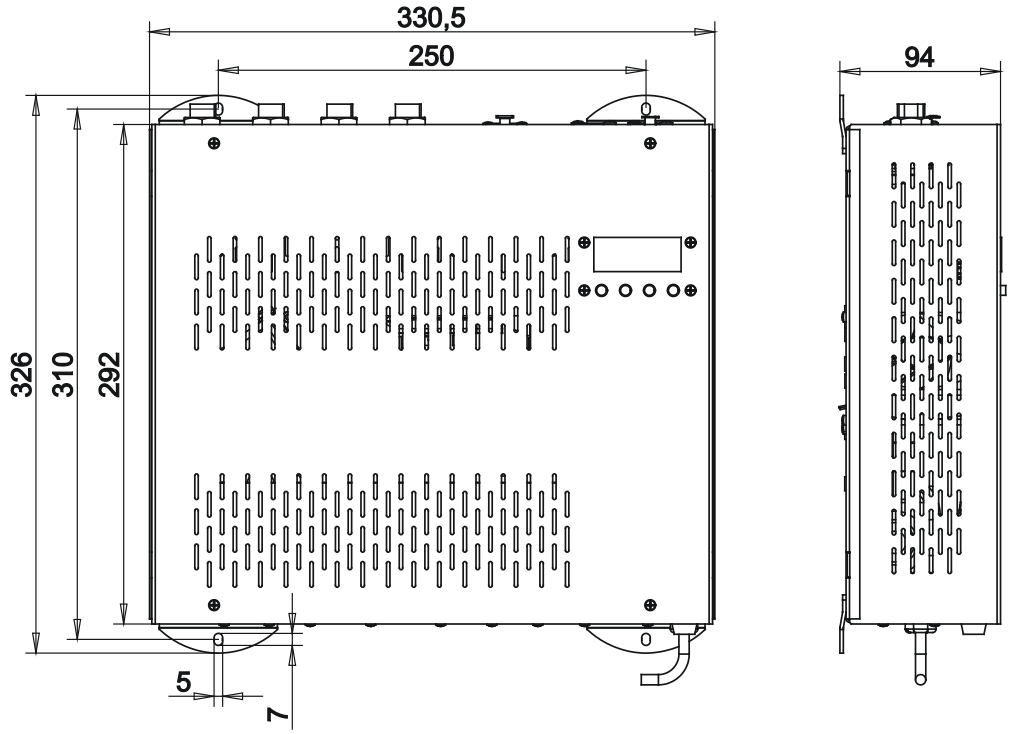
Chogori CGRBB-03BFFA-SL8001 (female)



1 GND (blue wire)
2 +48V (red wire)
3 Data (orange wire)

Operating temperature
-10°C/+40°C

Dimensions(mm)



Weight
4.7 kg

Total heat dissipation
2180 BTU/h (calculated)

Optional accessories
Connection cable ArcDot-ArcDotPower
(P/N 1006 2330) Active Terminator for ArcDot
(P/N 1006 2331 Passive Terminator for ArcDot

9. Replacing the fuse

1.Before replacing the fuse, unplug mains lead!
2.Unscrew the fuse holder on the rear side of the ArcDot Power with a fitting screwdriver from the housing (anti-clockwise).
3.Remove the old fuse from the fuse holder.
4.Install the new fuse in the fuse holder.
5.Replace the fuse holder in the housing and fix it.

Specifications are subject to change without notice.
February 25, 2013